

said engine (16), whereby an outboard jet drive (17) and engine (16) are removably attached to a boat hull (11) transom (12) and isolated in a separate housing (13).--

REMARKS

Responsive to the Attorney's Action of August 2, 2001, Applicant has amended the specification to clarify the reference characters 13 and 31 as designating different components. The numeral "13" designates the overall housing while the numerals "30" and "31" designate the top and base portion on the housing, respectively. The claims have also been rewritten to more clearly define the invention by providing a new independent claim 19 to replace claim 1. Applicant believes that the claims as rewritten define over the prior art.

The principal reference to Nanami is for an outboard jet drive for watercraft having an outboard motor type of jet propulsion unit. The jet propulsion system includes a watercraft hull having a transom hull undersurface forward of the transom. An internal combustion engine drives a transmission having a drive shaft with a pivotal joint pivotal relative to the engine about an axis and allows the water inlet opening to be swung upwardly through an opening in the undersurface of the hull for clearing foreign objects from the jet propulsion unit water inlet opening. This outboard jet drive, unlike the present invention, has a vertically mounted engine while the engine in the present application is mounted horizontally. Nanami does not have an engine mounting

platform attached in the housing and does not have a plurality of engine mounts attached thereto with a horizontally mounted engine mounted thereon. It also does not have the jet drive unit attached to the opposite side of the engine mounting platform and extending parallel to the engine and operatively attached to the engine. It also does not have a main fuel tank positioned inside the hull and having a fuel line connecting the main fuel tank for feeding fuel from the main fuel tank to an auxiliary fuel tank within the housing.

The Stallman patent is an outboard jet drive steering mechanism for watercraft operating in very shallow water. The steering mechanism utilizes a conduit along the underside of a boat hull in combination with a conduit extension member to guide water to the inlet port of the jet outboard propulsion unit. The Lehmann patent is an outboard mounted electrical power generating apparatus for boats which has a self-contained self operating internal combustion engine driven generator system for use with boats to provide electric power to onboard equipment independent of the boat propulsion system. The unit is mounted to the transom of a boat and connects a fuel line from the boat's fuel tank to the generator engine and includes a quick disconnect for the fuel line. A self-priming pump in the generator system pumps the fuel to the generator engine. The Takahasi et al. patent has an outboard motor fuel supply system which carries the usual outboard fuel tank and a system for pumping fuel from an external fuel supply tank carried in the boat to maintain the fuel level in the outboard

motor fuel tank. The Blanchard et al. patent is an adaptor plate mounting system for a marine jet propulsion unit having a vertically disposed crank shaft and a jet propulsion unit for isolating operational vibrations. The connecting assembly includes resilient portions to isolate vibrations generated by the power head. The Belt patent is a cantilever jet drive package mounted to the transom of a boat and has a water tunnel integrally formed as part of the boat structure. The turbo jet pump assembly is cantilevered from the aft portion of the transom of the drive shaft to the output of the drive engine of the boat. The jet pump and impeller unit are also cantileverly mounted to the aft face of the transom. A hole is defined in the transom at the bottom portion of the transom to allow passage for an elongated drive shaft.

The Purnell et al. patent is a ventilated outboard motor mounted pump jet assembly. A conventional outboard motor having a conventional outboard propeller configuration is converted to an outboard pump jet configuration having a pump jet unit. The Kanno patent is an engine control system for an internal combustion engine employing an electrically actuated component that provides protection in the event of a decrease of electrical power. The Pignata patent is an outboard power unit having an internal propeller assembly for a boat. An inboard/outboard power unit for a boat has an outboard power unit that includes at least an outboard drive train and an internal propeller assembly. The Alkema patent is an engine mount system for inboard power boats, such as ski boats, fishing boats, pleasure boats, and the like.

The Mizusawa et al. patent is a fuel supply system for outboard motors which can connect a conventional outboard motor to a remotely positioned fuel tank. The Hall patent is a jet propulsion apparatus which uses a shrouded impeller hydraulic jet propulsion unit and includes an attachment apparatus for converting a propeller drive to a propulsion system.

The present invention is an outboard jet drive boat having a boat hull having a transom and having a removably attached outboard jet drive attached to the transom. The jet drive includes a housing sealed against the intrusion of water and has an engine mounting platform therein having an engine mounted thereto on flexible engine mounts. The jet drive unit is attached to the housing below the engine supporting platform parallel to the engine and is operatively attached to the parallel mounted engine. The main fuel tank is positioned inside the hull and is connected to an auxiliary fuel tank inside the housing.

The invention as now claimed includes a housing sealed against the intrusion of water and having a platform mounted therein having a plurality of engine mounts attached thereto. An engine is mounted in the housing and supported generally horizontal on the platform. The jet drive unit is attached to the housing below the platform and extends generally parallel to the engine extending from the rear of the housing and being operatively attached to the engine in the housing above the platform. The basic claim also provides a main fuel tank positioned inside the hull of the boat and having a fuel line connected from the main fuel tank to the

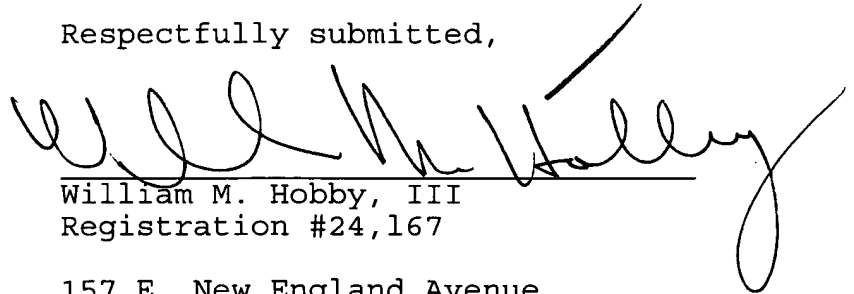
engine for the feeding of fuel to the engine. The mounting platform is sealed to the housing to prevent escaping liquids from the engine entering the water from the engine compartment.

The prior art does not show an outboard jet drive boat having a housing sealed against the intrusion of water and having an engine mounting platform mounted therein attached to the housing and having a plurality of engine mounts attached thereto. It also does not show an engine mounted in the housing and supported horizontally on the housing platform in which the engine and jet drive are mounted in parallel to each other.

The prior art does show an outboard jet drive unit mounted to a boat and shows outboard motors which have been converted to jet drives. The prior art also illustrates a fuel tank located in a boat hull with a supply line to an outboard mounted engine. However, most of the prior outboard jet drive units have vertically mounted engines with an onboard fuel tank. However, it would be unobvious to combine the prior patents without Applicant's disclosure as a guideline and any combination would not produce Applicant's invention. It would be difficult to combine the Nanami patent with any of the other patents without a total redesign of Nanami which redesign would be unobvious to a person of ordinary skill in the art. In addition, there are no teaching references to suggest the combining of Nanami with Stallman and Lehmann and Takahashi et al. and Blanchard et al. and Belt and any combination in the absence of Applicant's disclosure as a guide still would not look or work like Applicants.

Applicant would accordingly request reconsideration and allowance of the present application. The Examiner is requested to phone the undersigned attorney if this case can be expedited.

Respectfully submitted,



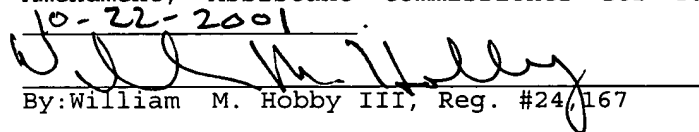
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1 mounted to the engine mounts 15 on the platform 14.  
2 The engine is preferably a diesel engine having a  
3 turbocharger with an intercooler. A jet drive unit 17  
4 is mounted beneath the platform 14 of the housing 13  
5 and is attached to the front end 18 of the housing 13.  
6 The jet drive unit extends through the rear 21 of the  
7 housing, out an opening 20 in the housing 13. The jet  
8 drive unit 17 has a water intake 22 and is positioned  
9 to be about level with the bottom 23 of the hull 11.  
10 A water exhaust 24 extending out the rear of the  
11 housing 13. A jet pump 25 is mounted in the jet drive  
12 17 for drawing the water thereinto through the jet  
13 pump and out the water exhaust 24. The jet drive unit  
14 17 is shown below the water line 26 and is supported  
15 on brackets 29 on the front 18 of the housing 13.  
16 Engine 16 has a belt drive 27 having a clutch  
17 mechanism therein for connecting the engine 16 to the  
18 drive pulley 28 of the jet drive unit 17. The housing  
19 13 is sealed against the intrusion of water thereto  
20 and sealed between the platform 14 and the housing 13  
21 to prevent water intrusion and to prevent oil or  
22 engine antifreeze from escaping therefrom.

23 The housing 13 top [of the housing] 30 [forms a]  
24 is removable [entry portion which is removable] from  
25 the [main part of the] housing main part 31, as shown  
26 in Figure 3. The housing 13 with the engine 16 and  
27 the jet drive unit 17 mounted therein is attached to  
28 the transom 12 of the hull 11 with a pair of brackets  
29 32. Brackets 32 allow the housing 13 to be mounted  
30 even with the bottom of the boat hull or higher than  
31 the bottom of the boat hull so as to reduce ingress  
32 of debris and damage to wildlife. The hull 11 has the  
33 main fuel tank 33 mounted therein having a fuel tank  
34 inlet 34 and a fuel line 35 extending therefrom  
35 through the transom 12 and  
36

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CLAIMS:

I claim:

Cancel claim 1.

- 1           2. An outboard jet drive boat in accordance with
- 2   claim [1] 19 in which a secondary fuel tank (38) is
- 3   mounted in said housing (13) and coupled between said
- 4   main fuel tank (33) and said engine (16).

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1           3. An outboard jet drive boat in accordance with  
2 claim 2 in which said housing (13) has a transom (12)  
3 hanging bracket (32) attached thereto and positioned  
4 for attaching said housing (13) to said transom (12)  
5 of said boat hull (11).

1           4. An outboard jet drive boat in accordance with  
2 claim 3 in which said engine (16) is a diesel engine.

1           5. An outboard jet drive boat in accordance with  
2 claim 3 including a fuel pump (41) mounted in said  
3 housing (13) and coupled to said secondary fuel tank  
4 (38).

Cancel claim 6.

1           7. An outboard jet drive boat in accordance with  
2 claim [6] 5 having engine controls mounted in said  
3 boat hull (11) coupled to said engine (16) and jet  
4 drive unit (17) for controlling said engine from said  
5 hull (11).

1           8. An outboard jet drive boat in accordance with  
2 claim 7 in which a jet drive unit (17) is mounted  
3 through said housing (13) rear side and attached to  
4 said front and rear sides.

1           9. An outboard jet drive boat in accordance with  
2 claim 8 having a battery mounted in said boat hull  
3 (11) and electrically connected to said engine (16)  
4 for starting said engine (16).



1           10. An outboard jet drive boat in accordance  
2 with claim 9 in which said engine (16) has monitoring  
3 sensors and said boat hull (11) has a plurality of  
4 engine instruments mounted therein operatively coupled  
5 to said engine sensors to provide sensed engine  
6 conditions in said engine instruments in said boat  
7 hull (11).

1           11. An outboard jet drive boat in accordance  
2 with claim 9 having a clutched belt drive (27)  
3 operatively connecting said engine to said jet drive  
4 unit (17).

1           12. An outboard jet drive boat in accordance  
2 with claim 11 in which said housing (13) is sealed  
3 against the intrusion of water and partially extends  
4 into the water when said boat hull (11) is afloat to  
5 provide added buoyancy to said boat hull (11).

1           13. An outboard jet drive boat in accordance  
2 with claim 12 in which said engine (16) has a sealed  
3 engine coolant system whereby the engine cooling is  
4 not dependent upon water from the body of water the  
5 boat hull (11) is floating upon.

1           14. An outboard jet drive boat in accordance  
2 with claim [6] 5 in which said engine (16) is mounted  
3 to said mounting platform (14) generally parallel to  
4 said jet drive unit (17).

1           15. An outboard jet drive boat in accordance  
2 with claim 14 in which said engine (16) is mounted in  
3 a reverse direction to said jet drive unit (17).

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1           16.   An outboard jet drive boat in accordance  
2   with claim [1] 19 in which said housing (13) is  
3   mounted to said transom (12) above the hull (11)  
4   bottom to thereby reduce the ingress of debris.

1           17.   An outboard jet drive boat in accordance  
2   with claim [1] 19 in which said platform (14) is  
3   sealed to said housing (13) to prevent the escape of  
4   leaking liquids from said engine.

1           18.   An outboard jet drive boat in accordance  
2   with claim 9 in which said housing (13) has an  
3   auxiliary battery mounted therein.



--19. An outboard jet drive boat comprising:

a hull (11) having a transom (12);

a housing (13) sealed against the intrusion of water, said housing (13) having front and rear sides, and a top and bottom and having a sealable entrance through the top thereof, and said housing (13) being removably attached to the transom (12) of said hull (11);

an engine mounting platform (14) attached in said housing (13) and having a plurality of engine mounts (15) attached thereto;

an engine (16) mounted in said housing (13) and supported generally horizontally on said platform (14);

a jet drive unit (17) attached in said housing (13) below said platform (14) and extending generally parallel to said engine (16), said jet drive unit (17) extending from the rear of said housing (13) and being operatively attached to said engine (16) in said housing (13) above said platform (14); and

a main fuel tank (33) positioned inside said hull (11) and having a fuel line (35) connecting said main fuel tank (33) to said engine (16) for the feeding of fuel from said fuel tank (33) to said engine (16), whereby an outboard jet drive (17) and engine (16) are removably attached to a boat hull (11) transom (12) and isolated in a separate housing (13).--

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